

## CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1 1. A media storage device for storing and providing access to data media in a data  
2 storage system comprising a data exchange device configured to exchange data stored on  
3 the data media and a media handling system configured to transfer the plurality of data  
4 media between the media storage device and the data exchange device, the media storage  
5 device comprising a housing configured to receive the data media, the housing having a  
6 first elongate alignment groove adapted to slidably engage with a corresponding first  
7 elongate reference rail located adjacent an opening in a data storage system such that the  
8 media storage device may be inserted and removed by slidably engaging the first elongate  
9 reference rail and the first elongate alignment groove.
- 1 2. The media storage device of claim 1, further comprising a locking plate attached  
2 to the housing and configured to engage a locking mechanism located in the opening in  
3 the data storage system.
- 1 3. The media storage device of claim 1, wherein the housing has opposing top and  
2 bottom portions, one of which has the first elongate alignment groove that is adapted to  
3 slidably engage the first elongate reference rail and the other which has a second elongate  
4 alignment groove that is adapted to slidably engage a second elongate reference rail.



1 8. The media storage device of claim 6, wherein the plurality of slots are defined by  
2 a plurality of dividers positioned in spaced-apart relation within the housing so that the  
3 plurality of dividers are substantially parallel to the axis of the elongate slot.

1 9. The media storage device of claim 7, wherein the spring mechanism comprises a  
2 metallic strip.

1 10. A method of storing data media in a data storage system, the data storage system  
2 comprising a data exchange device configured to exchange data stored on the data media  
3 and a media handling system configured to transfer the data media between a media  
4 storage device and the data exchange device, the method comprising the steps of:  
5 locating the data media within the media storage device, the media storage device  
6 configured to receive the data media and having a first elongate alignment groove; and  
7 inserting the media storage device into an opening in the data storage system by  
8 engaging the first elongate alignment groove with a first elongate reference rail located  
9 adjacent the opening in the data storage system and applying a force in a direction  
10 substantially parallel to the first elongate alignment groove.

1 11. The method of claim 10, further comprising the step of locking the media storage  
2 device in the data storage system by engaging a lock plate attached to the media storage  
3 device with a locking mechanism in the data storage system.

1 12. The method of claim 10, wherein the media storage device has opposing top and  
 2 bottom portions, one of which has the first elongate alignment groove that is adapted to  
 3 engage the first elongate reference rail and the other which has a second elongate  
 4 alignment groove that is adapted to engage a second elongate reference rail located  
 5 adjacent the opening in the data storage system.

1 13. The method of claim 10, wherein the step of locating the data media within the  
 2 media storage device comprise the step of applying a retention force to the data media  
 3 when the data media are located within the media storage device.

1 14. The method of claim 10, wherein the step of locating the data media within the  
 2 media storage device comprises the step of inserting the data media in a plurality of slots  
 3 located in a side portion of the media storage device.

1 15. A media storage device for storing and providing access to data media in a data  
 2 storage system comprising a data exchange device configured to exchange data stored on  
 3 the data media and a media handling system configured to transfer the data media  
 4 between the media storage device and the data exchange device, the media storage device  
 5 comprising a housing configured to receive the data media, the housing having a means  
 6 for slidably inserting and removing the media storage device within an opening in a data  
 7 storage system by engaging the media storage device with an elongate reference rail  
 8 located adjacent the opening in the data storage system.

1 16. The media storage device of claim 15, further comprising a means for locking the  
 2 media storage device within the opening in the data storage system.

1 17. The media storage device of claim 15, wherein the means for slidably inserting  
 2 and removing the media storage device is a first elongate alignment groove in the  
 3 housing.

1 18. The media storage device of claim 15, wherein the means for slidably inserting  
 2 and removing the media storage device involves a first elongate alignment groove in a top  
 3 portion of the housing and a second elongate alignment groove in a bottom portion of the  
 4 housing.

1 19. The media storage device of claim 15, wherein the housing is molded from  
2 plastic.

1 20. The media storage device of claim 15, further comprising a means for applying a  
2 force substantially parallel to the first elongate alignment groove such that when the  
3 means for slidably inserting and removing the media storage device engages the elongate  
4 reference rail the media storage device may be inserted and removed from the opening in  
5 the data storage system.